

WHAT IS CLAIMED IS:

1. An expansion valve including a power element that senses pressure and temperature of refrigerant at an outlet of an evaporator and controls a valve lift of a valve portion, to thereby control a flow rate of refrigerant supplied to the evaporator,

characterized in that a maximum value of the valve lift is set such that the flow rate is equal to 1.0 to 1.4 times a flow rate corresponding to a set tonnage.

2. The expansion valve as claimed in claim 1, wherein the power element causes a center disk for transmitting displacement of a diaphragm sensing the pressure and temperature of the refrigerant to a valve element of the valve portion via a shaft to be brought into abutment with an inner wall of a housing toward the valve portion, thereby defining the maximum valve lift of the valve portion.

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3. The expansion valve as claimed in claim 2, wherein the center disk is guided in a direction of displacement of the diaphragm, by a holder holding an end of the shaft on a side opposite to the valve portion.

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4. The expansion valve as claimed in claim 1, wherein the valve portion comprises a valve seat, a valve

element having a shape of a ball and disposed in a manner opposed to the valve seat from an upstream side, and a spring for urging the valve element in a valve-closing direction, and wherein the valve seat is tapered such that
5 an amount of tapering is equal to or larger than an amount of axial motion of the valve element.